



Cochise County Floodplain Management Ordinance

DRAFT

Adopted January 29, 2012

Cochise County Flood Control District

SECTION 1
STATUTORY AUTHORIZATION, FINDINGS OF FACT,
PURPOSE AND METHODS

1.1 STATUTORY AUTHORIZATION

In A.R.S. §§ 48-3601 through 48-3627, the Arizona State Legislature has delegated the responsibility to each county flood control district to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore, the Flood Control District Board of Directors of Cochise County, Arizona, does ordain as follows:

1.2 FINDINGS OF FACT

- A. The flood hazard areas of Cochise County are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities and, when inadequately anchored, cause damage in other areas. Uses that are inadequately flood proofed, elevated or otherwise protected from flood damage, also contribute to the flood loss.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize blight areas caused by flooding;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard;
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions,

- I. Maintain eligibility for disaster relief.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance includes methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel flood waters;
- D. Controlling filling, grading, dredging and other development which may increase flood damage; and
- E. Preventing or regulating the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards in other areas.

1.5 LEVEL OF STANDARDS

The performance requirements as specified in this title are minimum standards and address general floodplain management requirements. Specific projects may warrant additional requirements that may be imposed by the Cochise County Flood Control District. The Cochise County Flood Control District has the authority to establish standards and/or policies, as necessary, to carry out the provisions of this Ordinance. All drainage design standards, river and basin management plans, riparian preservation and mitigation standards, environmental protection, or other land-use plans approved by Cochise County and the Flood Control District are hereby incorporated into this Ordinance. All applicable floodplain management, flood hazard and flood control regulations, rules and standards promulgated by the state of Arizona and the federal government are hereby incorporated into this Ordinance.

SECTION 2 DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

Accessory structure, low-cost and small: A structure that is solely for the parking of no more than 2 cars; or limited storage (small, low cost shed).

Appeal: A request for a review of the floodplain administrator's interpretation of any provision of this ordinance or a request for a variance.

Area of shallow flooding: A designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base Flood: The flood having a one percent chance of being equaled or exceeded in any given year. Commonly referred to as the 100-year flood.

Base Flood Elevation: The calculated water surface elevation resulting from the base flood in relation to mean sea level.

Basement: Any area of the building having its floor sub-grade (below ground level) on all sides.

Board or Floodplain Board: The Board of Directors of the Cochise County Flood Control District. The Cochise County Board of Supervisors is the Board of Directors of the District.

Building: See "Structure".

Community: Any state, area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

Development: Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, above ground storage tanks, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of materials and equipment

District: The Cochise County Flood Control District. As established by Title 48, Chapter 21 of the A.R.S.

Elevation Certificate: The official FEMA Elevation Certificate form certifying the elevation of a property, structure, or other location in reference to the base flood elevation or regulatory flood elevation. All elevations must reference The North American Vertical Datum (NAVD) 1988 datum.

Encroachment: The advance or infringement of uses, plant growth, fills excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Erosion: The physical process where flowing flood water removes sediment and earthen material causing the banks and beds of stream channels to wear away and degrade over time. This peril is not, per se, covered under the National Flood Insurance Program.

Erosion Hazard Area: Land adjoining a watercourse regulated by this ordinance, which is deemed by the floodplain administrator to be subject to flood-related erosion losses.

Erosion Hazard Setback: The minimum horizontal distance from the top of bank of a watercourse, where a structure must be constructed or placed.

Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of flood waters; (2) the unusual and rapid accumulation or runoff of surface waters from any source; and/or (3) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this definition.

Flood Insurance Rate Map (FIRM): The official map on which FEMA has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood Insurance Study (FIS): The official report provided by FEMA that includes flood profiles, FIRM and the water surface elevation of the base flood.

Floodplain: Any areas within a watercourse which have been or may be covered partially or wholly by flood waters from the base flood including land that has been, or may be, subject to flooding from storm water runoff, overflow of flood waters from a watercourse, alluvial fans, sheet flood zones, or other property subject to flooding. The floodplain includes the stream channel, the floodway, and the floodway fringe area.

Floodplain Administrator: The Community Development Director or his designee who oversees administration and enforcement of the floodplain management regulations contained within this ordinance as required by the NFIP.

Floodplain Management: The operation of an integrated natural resource management program, encompassing corrective and preventive measures for reducing flood and erosion damage. Floodplain management includes, but is not limited to, emergency preparedness planning, flood control works and floodplain management regulations.

Floodplain Management Regulations: This ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion controls) and other application of police power which control development in flood-prone areas. This term describes federal, state, or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

Floodplain Use Permit (FPUP): An official document which authorizes specific activity within a regulatory floodplain or erosion hazard area.

Flood-proofing: Any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Flood-Related Erosion: The collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

Floodway: the channel or a river or other watercourse and the adjacent land areas necessary in order to discharge the one hundred-year flood without cumulatively increasing the water surface elevation. If floodway is delineated on FIRM, the base flood elevation may not be changed. If not mapped then BFE may only rise by one tenth of a foot.

Floodway Fringe: The area of the floodplain on either side of the “Regulatory Floodway” where encroachment may be permitted.

Governing Body: The local governing unit (i.e., Cochise County), which is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

Hardship: For the purposes of approving variances of regulation under the NFIP, the exceptional hardship which would result from a failure to grant the requested variance. The governing body requires that the variance be exceptional, unusual and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences or the disapproval of one’s neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

Highest Adjacent Grade: The highest **natural** elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure: A structure that is listed in the National Register (a listing maintained by the Department of Interior) of Historic Places or the State Inventory of Historic Places.

Levee: A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or diverts the flow of water so as to provide protection from temporary flooding.

Levee System. A flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest Adjacent Grade: The lowest point of the ground level immediately next to a building.

Lowest Floor: The lowest floor of the lowest enclosed area including basement (see “Basement” definition). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building’s lowest floor; provided that such enclosure is not built

so as to render the structure in violation of the applicable non-elevation design requirements (i.e. flood resistant materials) of this ordinance.

Lowest Floor Elevation (LFE)--The measured distance of a building's lowest floor above the National Geodetic Vertical Datum (NGVD) or other datum specified on the FIRM for that location

Manufactured Home. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. For floodplain management purposes, the term manufactured home also includes mobile homes, park trailers, travel trailers, recreational vehicles, and other similar vehicles placed on a site for more than 180 consecutive days.

Manufactured Home Park or Subdivision. A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Market Value. Shall be determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation which has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. Also defined in the substantial damage and substantial improvement section of this Ordinance. For the purpose of property acquisition, market value will be determined by a certified/qualified appraiser.

For the purpose of substantial damage, Damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

For the purpose of substantial improvement, Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Mean Sea Level (MSL). For purposes of the NFIP, the North American Vertical Datum (NAVD) of 1988, to which base flood elevations shown on the FIRM are referenced.

New Construction. For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM (December 4, 1984) and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

Non-Special Flood Hazard Areas: designated as Shaded X, X and D on FIRM (see Special Flood Hazard Areas for regulated zone definition)

Shaded X: Areas of 500-year flood; areas of 100-year flood with average depths of less than one (1) foot or with drainage areas less than one (1) square mile; and protected by levees from 100-year flood.

Zone X: Areas determined to be outside 500-year floodplain

Zone D: Areas of undetermined, but possible flood hazards

Obstruction. Includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any regulated watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water or its likelihood of being carried downstream.

One-Hundred Year Flood. The flood having a one percent chance of being equaled or exceeded in any given year. (*See "Base Flood" definition*)

Person. An individual or his agent, firm, partnership, association or corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.

Recreational Vehicle. A vehicle that is:

- A. Built on a single chassis;
- B. 400 square feet or less when measured at the largest horizontal projection;
- C. Designed to be self-propelled or permanently towable by a light duty truck; and
- D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Registered Engineer or Surveyor. An engineer or surveyor registered pursuant to Arizona State law.

Regulatory Flood Elevation. An elevation one foot above the base flood elevation for a watercourse for which the base flood elevation has been determined and shall be determined by the criteria developed by the director of ADWR for all other watercourses.

Regulatory floodway. The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a tenth of a foot.

Repetitive Loss Structure. A **residential property** that is covered under an NFIP flood insurance policy and:

- (a) That has at least four NFIP claim payments (including building and contents) over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or
- (b) For which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

For both (a) and (b) above, at least two of the referenced claims must have occurred within any ten-year period, and must be greater than 10 days apart.

Sheet Flow Area. Those areas which are subject to flooding with depths of one-half foot or greater during the base flood event, where a clearly defined channel does not exist and the path of the flooding is often unpredictable and indeterminate

Special Flood Hazard Area. An area designated by FEMA that is subject to a 1 percent or greater chance of flooding in any given year, and from this point forward abbreviated as SFHA. An SFHA may be designated as a Zone A, AE, AH, & AO. (Zones Shaded X, X and D are not considered SFHA for the purpose of floodplain use permit requirements).

Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AE: Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AH: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations BFEs derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply

Zone AO: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply. Some Zone AO has been designated in areas with high flood velocities such as alluvial fans and washes.

Start of construction. Includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure. A walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.

Substantial Damage. Damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. In the absence of information to the contrary, the appraised value of the structure as listed in the County Assessor's records is presumed to be fair market value.

Substantial Improvement. Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- B. Any alteration of a "historic structure", provided that the alteration would not preclude the structure's continued designation as a "historic structure".

Variance. A grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

Violation. The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

Water Surface Elevation. The height, in relation to the North American Vertical Datum NAVD of 1988, or current FEMA approved datum, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

Watercourse. A watercourse means only the channel and banks of an identifiable drainage way, and not the adjoining floodplain areas.

Watershed. The drainage area above any point on a watercourse.

ACRONYMS:

ARS – Arizona Revised Statutes
BFE – Base Flood Elevation
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Rate Map
FIS – Flood Insurance Study
FPUP– Floodplain Use Permit
LOMA – Letter of Map Amendment
LOMC – Letter of Map Correction
LOMR – Letter of Map Revision
LOMR-F – Letter of Map Revision based on Fill
MSL – Mean Sea Level
NFIP – National Flood Insurance Program
SFHA – Special Flood Hazard Area

SECTION 3 GENERAL PROVISIONS

3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all areas of special flood hazards within the boundaries of Cochise County except those incorporated cities and towns which have adopted a resolution to assume the powers and duties of floodplain management within its area of jurisdiction in accordance with A.R.S. 48-3610, unless and until said resolution is rescinded.

3.2 ESTABLISHING AREAS OF SPECIAL FLOOD HAZARD AND REGULATORY FLOODPLAINS, FLOODWAYS.

- A. The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled "The Flood Insurance Study for Cochise County, December 4, 1984" with accompanying Flood Insurance Rate Maps (FIRMs) date August 8, 2008, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this ordinance. This Flood Insurance Study (FIS) and attendant mapping define the minimum area of applicability of this ordinance and may be supplemented by studies of other areas which are recommended to the Floodplain Board by the Floodplain Administrator. The Board shall delineate (or by rule require developers of land to delineate) areas within its jurisdiction where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by the Federal Emergency Management Agency and the Director of Water Resources. The FIS, and FIRMs are on file at the Cochise County Community Development Department, *1415 Melody Lane, Bisbee, Arizona 85603*
- B. Due to continuously and episodically changing hydrologic and hydraulic conditions on the watercourses within Cochise County, base flood peak discharges, flow volumes, and associated special flood hazard areas, regulatory floodplain and erosion hazard areas are continuously subject to revision. At a minimum, base flood values will meet or exceed the current values established by FEMA, and reflect historic flood information and general, current, watershed conditions.
- C. In those areas where the regulatory floodplain and erosion hazard areas are not delineated pursuant to Sections 3.2.A and 3.2.B, and upon request for a county permit, the Floodplain Administrator may require the land owner to establish the regulatory floodplain and floodway limits through a hydrologic and hydraulic study prepared by an Arizona Registered Professional Civil Engineer.
- D. In those areas where a hydrologic and hydraulic study has been prepared by an Arizona Registered Professional Civil Engineer which delineates the regulatory floodplains, floodways and erosion hazard areas, and has been approved by the Floodplain Administrator, the delineation of those boundaries shown within the study shall be the regulatory floodplain, floodway and erosion hazard areas governed by this ordinance.
- E. Construction of any improvement which changes the configuration of the delineated floodplain boundaries contained within the Flood Insurance Study, whether upstream or downstream from or adjacent to the parcel under development, the owner shall provide Cochise County a new delineation of regulatory floodplain boundaries affected by the improvement, prior to the release of assurances

for subdivisions or certificate of occupancy for development plans. The new delineation and reports shall be prepared in conformance with the requirements of FEMA, the Director of the Arizona Department of Water Resources and this ordinance. The owner, or the owner's engineer, shall submit the required flood insurance study information to FEMA. The owner shall be responsible for providing Cochise County a copy of all correspondence with FEMA.

3.3 COOPERATIVE AGREEMENTS AND CONSULTANTS

Cochise County may retain consultants and experts, and may enter into cooperative agreements for the delineation of regulatory floodplains, floodways, riparian habitat, and erosion hazard areas or for other assistance and guidance considered appropriate and necessary.

3.4 COMPLIANCE

All development of land, construction of residential, commercial or industrial structures, or future development that is subject to the terms of this ordinance must also comply with all other applicable laws and regulations.

3.5 ABROGATION AND GREATER RESTRICTIONS

This ordinance is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this ordinance and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

3.6 INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

- A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

3.7 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Cochise County, the Cochise County Flood Control District or any officer or employee thereof, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

3.8 STATUTORY EXEMPTIONS

- A. In accordance with A.R.S. § 48-3609(H), unless expressly provided, this and any regulation adopted pursuant to this article do not affect:

- 1 Existing legal uses of property or the right to continuation of such legal use. However, if a nonconforming use of land or a building or structure is discontinued for twelve months, or substantial damaged to the extent of 50 percent of its market value as determined by an Arizona Certified Appraiser, any further use shall comply with this article and regulations of the Cochise County.
 - 2 Reasonable repair or alteration of property for the purposes for which the property was legally used on August 3, 1984, or on the date any regulations affecting such property take effect, except that any alteration, addition or repair to a nonconforming building or structure which would result in increasing its flood damage potential by 50 percent or more shall be either flood-proofed or elevated to or above the regulatory flood elevation;
 - 3 Reasonable repair of structures constructed with the written authorization required by A.R.S. § 48-3613; and
 - 4 Facilities constructed or installed pursuant to a Certificate of Environmental Compatibility issued pursuant to A.R.S. Title 40, Chapter 2, Article 6.2.
- B. Except as provided in A.R.S. § 48-3625 and in this subsection, a person shall not engage in any development which will divert, retard or obstruct the flow of waters in any watercourse without securing written authorization from the Board. Where the watercourse is a delineated floodplain no development shall take place in the floodplain without written authorization from the Board. Written authorization is not required for nor shall the Board prohibit:
1. The construction of bridges, culverts, dikes and other structures necessary to the construction of public highways, roads and streets intersecting or crossing a watercourse;
 2. The construction of storage dams for watering livestock or wildlife, structures on banks of a watercourse to prevent erosion of or damage to adjoining land if the structure will not divert, retard or obstruct the natural channel of the watercourse or dams for the conservation of floodwaters as permitted by A.R.S. Title 45, Chapter 6;
 3. Construction of tailing dams and waste disposal areas for use in connection with mining and metallurgical operations. This paragraph does not exempt those sand and gravel operations that will divert, retard or obstruct the flow of waters in any watercourse from complying with and acquiring authorization from the floodplain board pursuant to regulations adopted by the Floodplain Board under A.R.S. Title 48, Chapter 20, Article 1;
 4. Other construction upon determination by the floodplain board that written authorization is unnecessary;
 5. Any flood control district, city, town or other political subdivision from exercising powers granted to it under A.R.S. Title 48, Chapter 21, Article 1;
 6. The construction of streams, waterways, lakes and other auxiliary facilities in conjunction with development of public parks and recreation facilities by a public agency or political subdivision; and
 7. The construction and erection of poles, towers, foundations, support structures, guy wires and other facilities related to power transmission as constructed by any utility whether a public service corporation or a political subdivision.

C. CIVIL REMEDIES

As provided for by A.R.S. § 48-3613(D), in addition to other penalties or remedies otherwise provided by law, this state, a political subdivision or a person who may be damaged or has been damaged as a result of the unauthorized diversion, retardation or obstruction of a watercourse has the right to commence, maintain and prosecute any appropriate action or pursue any remedy to enjoin, abate or otherwise prevent any person from violating or continuing to violate Subsection 3.8.B of this ordinance or any regulations

adopted pursuant thereto. If a person is found to be in violation of Subsection 3.8.B of this ordinance, the court shall require the violator to either comply with terms of that subsection, if authorized by the Floodplain Board, or to remove the obstruction and restore the watercourse to its original state. The court may also award such monetary damages as are appropriate to the injured parties resulting from the violation including reasonable costs and attorney fees.

3.9 DECLARATION OF PUBLIC NUISANCE

Every new structure, building, fill, excavation or development located or maintained within any area of special flood hazard after August 8, 1973, in violation of this ordinance is a public nuisance per se and may be abated, prevented or restrained by action of this political subdivision. (A.R.S. § 48-3614)

3.10 SEVERABILITY

This ordinance and the various parts thereof are hereby declared to be severable. Should any Section or Subsection of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the Section or Subsection so declared to be unconstitutional or invalid.

3.11 RECOVERY OF ADMINISTRATIVE AND OTHER COSTS.

Cochise County shall be entitled to recover all costs, administrative, engineering and legal, as well as actual costs to remove or modify a structure, encroachment and any other work in violation of this ordinance.

3.12 VIOLATIONS AND ENFORCEMENT

- A. The process for determining, enforcing, and appealing citations for violations shall be as established by the Legislature, which currently is codified in A.R.S. §§ 48-3613, -3614, -3615, and -3615.01. In the event the Legislature alters or adds to that process, this section shall be deemed amended accordingly.
- B. For purposes of this Section, the “chief engineer” shall mean the County Engineer or his designee.
- C. The Chief Engineer is responsible for investigating all complaints of suspected violations of this Ordinance.
- D. The board of hearing review shall be the Floodplain Board of Directors.
- E. The Chief Engineer shall develop a form to be provided with a notice of violation, as required by statute, in which an alleged violator can admit or deny the allegations, and a form for a decision and order, as also required by statute.
- F. If possible, the hearing officer required by statute will be the hearing officer who hears zoning violations. If not possible, the Floodplain Board of Directors will separately appoint a hearing officer.
- G. Penalties for violation shall be as prescribed by the Legislature, currently codified in A.R.S. § 48-3615. In addition, the Floodplain Administrator may submit to the FEMA a denial of insurance, stating that the property is in violation of a cited State or local law, regulation or ordinance, pursuant to Section 1316 of the National Flood Insurance Act of 1968.
- H. The Chief Engineer is authorized to obtain administrative search warrants in the manner provided by the Legislature, currently codified in A.R.S. § 48-3603.C.26.
- I. The rules of procedure for hearings and review shall be the same as those adopted by the Board of Supervisors as Rules of Procedure on Zoning and Building Code Violations, except that for purposes of Floodplain violation enforcement:

- 1 A “complaint” is deemed to be filed upon receipt of a form or written statement by the alleged violator denying the allegations and requesting a hearing, as provided by statute. The “complaint” will consist of the Notice of Violation.
- 2 Service of the Notice of Violation can be affected in the first instance by Certified Mail, if the receipt is signed and returned. If the receipt is not signed and returned, service will be by personal service. If the alleged violator cannot be personally served, then service may be by any means set forth in the Arizona Rules of Civil Procedure.
- 3 Certain terminology that is used in the Rules of Procedure on Zoning and Building Code Violations is deemed to be changed to harmonize with Floodplain regulation and enforcement terminology. For example, “Chief Engineer” instead of “Zoning Inspector” and “Floodplain Board of Directors” instead of “Board of Supervisors”

SECTION 4 ADMINISTRATION

4.1 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The Community Development Director or his designee is hereby appointed Floodplain Administrator, whose duties include administration and enforcement of the Cochise County Floodplain Management Ordinance and the National Floodplain Insurance Program and the day to day operations of the Cochise County Floodplain Division.

4.2 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties of the Floodplain Administrator, together with duly authorized representatives shall include:

A. PERMIT REVIEW

Review all development permits in designated special flood hazard areas to determine that:

1. The permit requirements of this ordinance have been satisfied;
2. Notify applicant that other state and federal permits may need to be obtained and are their responsibility;
3. The site is reasonably safe from flooding;
4. The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. For purposes of this ordinance, "adversely affect" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one tenth of a foot at any point.

- B. Provide information and assistance to the public upon request about permit procedures and floodplain construction requirements.
- C. Maintain for public inspection and furnish upon request, any regulatory flood data and/or studies.
- D. Maintain and make available a record of the "as-built" Elevation Certificate showing the lowest floor (including basement) of all new and/or substantially improved buildings constructed in the SFHA.
- E. Maintain and make available a record of the engineer's certificate documenting the flood-proofing methods utilized for nonresidential structures.
- F. Maintain a record of all variance actions, including justification for their issuance.

Additionally, the Floodplain Administrator shall;

- G. Advise any city or town, having assumed jurisdiction over its floodplains in accordance with A.R.S. § 48-3610(B)(1), of any development plan within a floodplain or floodway which could affect floodplains, floodways or watercourses within one mile of such city's or town's area of jurisdiction. A copy of the development plan shall be provided to the city or town prior to approval of the development.
- H. Whenever a watercourse that is regulated by FEMA is to be altered or relocated the Floodplain Administrator shall:
 - 1. Notify adjacent communities and ADWR prior to such alteration or relocation of a watercourse and submit evidence of such notification to FEMA.
 - 2. Require as a condition of the floodplain use permit that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained.
- I. Within one hundred twenty (120) days after completion of construction of any flood control protective works which changes the rate of flow during the flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person or agency responsible for installation of the project shall provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineation shall be done according to the criteria adopted by the Arizona Department of Water Resources.
- J. Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 6.0.
- K. Take actions on violations of this ordinance as required in Sections 3.13 herein.

4.3 ESTABLISHMENT OF FLOODPLAIN USE PERMIT

A Floodplain Use Permit shall be obtained before construction or development begins, including placement of manufactured homes, within any area of special flood hazard established in Section 3.2. Application for a Floodplain Use Permit shall be made on forms furnished by the Floodplain Administrator and may include,

but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions and elevation of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

- A. Proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures. In Zone AO, elevation of existing highest adjacent natural grade and proposed elevation of lowest floor of all structures;
- B. Proposed elevation in relation to mean sea level to which any non-residential structure will be flood-proofed;
- C. Certification by a registered professional engineer or architect that the flood-proofing methods for any nonresidential structure meet the flood-proofing criteria in Section 5.1.C.2;
- D. Base flood elevation data for subdivision proposals or other development greater than 50 lots or 5 acres; and
- E. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

Application for a Floodplain Use Permit shall be made on forms furnished by the Cochise County Floodplain Department or by a building permit application provided by the Cochise County Community Development Department.

These applications shall include, but not be limited to, plans drawn to scale showing the north point, nature, location and dimensions of the area in question, existing and proposed structures and utilities, washes, watercourses or drainage ways, fill, storage of materials, walls, fences, adjacent streets and driveways, or other development that may obstruct, divert or retard flow and a description of the extent to which any watercourse will be affected, altered or relocated as a result of proposed development.

A FEMA Elevation Certificate shall be required to demonstrate compliance with regulatory flood elevation requirements for structures, manufactured homes, service facilities, or other improvements.

SECTION 5 PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1 STANDARDS OF CONSTRUCTION

In all areas of special flood hazards, the following standards are required:

A. Anchoring

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; and
2. All manufactured homes and storage tanks shall meet the anchoring standards of section 5.4.B.

B. Construction Materials and Methods

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
3. All new construction, substantial improvement and other proposed new development shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment (including ductwork) and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and
4. Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

C. Elevation and Flood-proofing

1. Residential Construction

Residential construction, new or substantial improvement, shall have the lowest floor, including basement:

- a. In an AO Zone, elevated to or above the regulatory flood elevation, or elevated at least two feet above the highest adjacent grade if no depth number is specified.
- b. In an A Zone where a BFE has not been determined, elevated to or above the regulatory flood elevation or be elevated in accordance with the criteria developed by the Director of the Arizona Department of Water Resources.
- c. In Zones AE, AH and A1-30, elevated to or above the regulatory flood elevation.

Upon completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community's building inspector to be properly elevated. Such certification and verification shall be provided to the Floodplain Administrator. Residential structures may not be flood-proofed, only elevated.

2. Non Residential Construction

Nonresidential construction, new or substantial improvement, shall either be elevated to conform with Section 5.1.C.1 or together with attendant utility and sanitary facilities:

- a. Be flood-proofed below the elevation recommended under Section 5.1.C.1 so that the structure is watertight with walls substantially impermeable to the passage of water;
- b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
- c. Be certified by a registered professional engineer or architect that the standards of this section are satisfied. Such certification shall be provided to the Floodplain Administrator.

3. Flood openings

All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must meet or exceed the following criteria:

- a. Have a minimum of two openings, on different sides of each enclosed area, having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater; or
- b. If it is not feasible or desirable to meet the openings criteria stated above, a registered engineer or architect may design and certify the openings.

4. Manufactured Homes

- a. Manufactured homes shall also meet the standards in Section 5.5

5. Garages and low cost accessory structures

A. Attached garages.

1. A garage attached to a residential structure, constructed with the garage floor slab below the regulatory flood elevation, must be designed to allow for the automatic entry of flood waters. See Section 5.1.C.3. Areas of the garage below the regulatory flood elevation must be constructed with flood resistant materials. See Section 5.1.B.
2. A garage attached to a nonresidential structure must meet the above requirements or be dry flood-proofed.

B. Detached garages and accessory structures.

1. "Accessory structure" used solely for parking (2 car detached garages or smaller) or limited storage (small, low-cost sheds), as defined in Section 2.0, may be constructed such that its floor is below the regulatory flood elevation, provided the structure is designed and constructed in accordance with the following requirements
 - a. Use of the accessory structure must be limited to parking or limited storage;
 - b. The portions of the accessory structure located below the regulatory flood elevation must be built using flood-resistant materials;
 - c. The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;

- d. Any mechanical and utility equipment in the accessory structure must be elevated or flood-proofed to or above the regulatory flood elevation;
- e. The accessory structure must comply with floodplain encroachment provisions in Section 5.7; and
- f. The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with Section 5.1.C.3.

5.2 STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT

- A. The storage or processing of materials in an area of special flood hazards that are, in time of flooding, buoyant, flammable, and explosive or could be injurious to human, animal or plant life is prohibited.
- B. Storage of other material or equipment may be allowed if not subject to major damage by floods and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning.

5.3 STANDARDS FOR UTILITIES

- A. All new or replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
- B. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- C. Waste disposal systems shall not be installed wholly or partially in a floodway.

5.4 STANDARDS FOR MANUFACTURED HOMES

All manufactured homes that are placed or substantially improved shall:

- A. Meet all State of Arizona Office of Manufactured Housing requirements set forth in the Minimum Standard for Manufactured Housing Foundation in Floodplains. Including the following:
 - 1. Foundations, or fill pad erosion protection, for installation within floodplain with a base flood elevation depth greater than 1.0 foot shall be designed by an Arizona Registered Engineer and approved by all appropriate local governmental agencies and by the Office of Manufactured Housing
- B. Be elevated so that the bottom of the structural frame or the lowest point of any attached utility (this includes duct work and ground mounted air conditioning units), whichever is lower, is elevated at or above the regulatory flood elevation as stated in 5.1.C of this ordinance; and
- C. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-

top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

- D. Certification that the installation of a manufactured home meets all of the requirements of this section is required as outlined in the Floodplain Use Permit. Such certification shall be provided by a licensed installer or an Arizona licensed engineer.

5.5 STANDARDS FOR RECREATIONAL VEHICLES

All recreational vehicles placed within a special flood hazard on site will either:

- A. Be on site for fewer than 180 consecutive days, or
- B. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- C. Meet the permit requirements of Section 4.3 of this ordinance and the elevation and anchoring requirements for manufactured homes in Section 5.4.

5.6 STANDARDS FOR GENERAL LAND DISTURBANCE

Where more than one (1) acre of land is to be altered or disturbed or where imperviousness increases more than fifty (50) per cent from the existing conditions, a drainage report will be required. This report shall be certified by an Arizona Registered Professional Engineer and shall include, at a minimum, the following:

- A. site plan that shall include, but not be limited to, plans drawn to scale showing the north point, nature, location and dimensions of the area in question, existing and proposed structures, washes, watercourses or drainage ways, fill, storage of materials, walls, fences, or other development that may obstruct, divert or retard flow and a description of the extent to which any watercourse will be affected, altered or relocated as a result of proposed development.
- B. A schematic depicting the existing and proposed drainage patterns, identifying the 100-year floodplain limits and any proposed changes to the floodplain limits;
- C. The hydrologic and hydraulic effects that the alteration or disturbance will have on adjacent properties, including public and private roadways, and demonstrate the methods to be used to mitigate any adverse impact due to increased storm water runoff generated by the land alteration or disturbance.
- D. Any land disturbance that occurs within a Special Flood Hazard Area (SFHA) requires a Cochise County Floodplain Use Permit.

5.7 STANDARDS FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

- A. Application. These standards shall apply to all commercial and industrial developments where the cumulative developed area is greater than One (1) acre or it contains greater than 50% impervious area within the development

- B. Engineering. A hydrologic and hydraulic report detailing existing drainage conditions and proposed full development drainage conditions is to be performed by an Arizona Registered Professional Civil Engineer, and submitted to, and approved by the Floodplain Administrator prior to the approval of a building permit. The report should include a summary table showing the concentration points, drainage areas, the calculated peak-discharge rates for both pre-development conditions, and the differences in the discharge (to include at the minimum 100 yr return period/24hr peak)
- C. Plans. Plats and development plans to show areas subject to flooding and erosion. All site and development plans submitted shall show location, by survey or photographic methods, of streams, watercourses, canals, irrigation laterals, private ditches, culverts, lakes, or other water features, including those areas subject to flooding or erosion. The plats/plans shall also include the direction of any flow and drainage area, as well as water surface elevations, the limits of inundation, and erosion hazard setback for the base flood if such a flood has a peak flow rate equal or greater than fifty (50) cubic feet per second (cfs). These requirements are in addition to all Planning and Zoning site plan requirements.

5.8 STANDARDS FOR SAND AND GRAVEL MINING

- A. Extraction of sand, gravel and other materials is allowed, if permitted by all other applicable Federal, State, and local regulations, within the floodway fringe and erosion hazard areas, provided that excavations are not so located nor of such depth, or width, or length, or combination of depth-width-length as to present a hazard to structures (including, but not limited to roads, bridges, culverts, and utilities), to banks or watercourses, or to other property.
- B. There shall be no stockpiling of material or tailings within the floodway fringe areas that may obstruct, divert or retard the flow of floodwaters except as reviewed and approved by the Floodplain Administrator.
- C. Due to the rapidly changing hydraulic characteristics of watercourses in Cochise County, and the effects excavations have on these characteristics, Floodplain Use Permits for excavations shall only be issued for a limited period of time, not to exceed one year, subject to annual renewal upon review by the Floodplain Administrator.
- D. In addition to those conditions provided for elsewhere, Floodplain Use Permit for excavations may impose conditions regarding the area and location in which excavations are allowed, the maximum amount of material to be excavated, and other reasonable restraints on methods of operation, including time restraints.
- E. Permitting for Sand and Gravel will require a closure plan that addresses flood heights, velocity, erosion, and grade control during and after the periods of extractions. The Floodplain Administrator may require hydrologic, hydraulic and geomorphic analyses addressing the existing conditions as well as the impacts under the proposed method of operation.
- F. The Board may grant variances as provided by Section 6 of this ordinance.
- G. Standards for minimal impact no permit required.

5.9 STANDARDS FOR SUBDIVISIONS

- A. All new subdivision proposals, including proposals for manufactured home parks and subdivisions, greater than 50 lots or 5 acres, whichever is the lesser, shall:

1. Identify the area of the special flood hazard area and the elevation of the base flood for contributing drainage area of a quarter square mile or greater.
 2. Identify on the final plans the elevation(s) of the proposed structure(s) and pads. If the site is filled above the base flood elevation, the final lowest floor and grade elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.
- B. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
- C. All subdivision proposals and other proposed development shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- D. All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards.

Application

- A. Land may not be parceled or subdivided in such a manner as to create lots unsuitable for development because of flood or erosion hazards.
- B. All subdivision plats, development plans, associated building plans and improvement plans are subject to the design requirements for regulatory floodplains as specified under A. R. S. Section 48-3609 and this ordinance.

Plan Information

All tentative plats and development plans submitted to the County shall show location, by survey or photographic methods, of streams, watercourses, canals, irrigation laterals, private ditches, culverts, lakes and other water features, including those areas subject to flooding or erosion. The plats/plans shall also include the direction of any flow and drainage area, as well as water-surface elevations and the limits of inundation for the base flood, if such a flood has a contributing drainage area equal to or greater than a quarter of a square mile, or is a FEMA mapped floodplain. Plats or plans shall be sealed by an Arizona Registered Land Surveyor or Engineer.

A. Grading and Drainage Improvement

- 1 A floodplain use permit is required prior to commencement of any site improvements or grading associated with a subdivision development. A grading plan must be submitted to the Cochise County Flood Control District for review and approval. Detailed improvement plans for storm drains or channel improvements must also be submitted to the same department for review and approval. Where a grading plan or detailed drainage improvement plans are not provided, the Floodplain Administrator may require additional information and engineering plans prior to issuing a floodplain use permit.
- 2 All final plats, tentative plats and development plans shall show proposed grading and drainage improvements.

B. Grading and drainage plans shall demonstrate:

1. The methods for flood proofing and/or drainage control for the development, including sufficient lot grading information to demonstrate adequate finished pad elevations and/or drainage slopes to protect building foundations;

2. That improvements are compatible with the existing upstream and downstream drainage conditions and that any proposed grading and/or grade change will not have an adverse impact on surrounding properties;
3. The methods of erosion and sediment control;
4. The methods of mitigating increased urban peak and volumetric flood water runoff or discharge on downstream properties created as a result of the development.
5. Any necessary erosion and/or sediment control practices such as re-vegetating disturbed areas.

C. Floodplain and Floodway Boundaries - Drainage Areas

1. All final plats and development plans shall indicate the limits of the regulatory floodplains, erosion hazard boundaries, and the limits of the federally established regulatory floodplains and floodway (if applicable), and be delineated in a surveyable manner and sealed by an Arizona Registered Land Surveyor.
2. Where subdivision improvements modify or remove the SFHA that is designated on the federal FIRM, a hydraulic analysis of the impact and the engineering plans for the modifications must be approved by the District and a Conditional Letter of Map Revision (CLOMR) submitted and approved by FEMA prior to the recording of the final plat.
3. Where modification of a federally defined floodway is proposed, approval of a CLOMR by FEMA amending the floodway boundary is required prior to the recording of the final plat.
4. Prior to the release of assurances for subdivisions or certificate of occupancy for development plans, the Letter of Map Revision (LOMR) must be approved by the Flood Control District and FEMA.

D. Street Elevation Requirements

Streets required for paved permanent access shall be designed and constructed so that the flow depths over them do not exceed 1 foot in depth during the base flood.

E. Building Site Location Restrictions

1. Building sites are to be located outside of the regulatory floodplain if possible.
2. No structure or fill is to be placed within the regulatory floodway.
3. Structures shall be constructed/placed in accordance with the erosion hazard setback as described in Section 5.12.

F. Setbacks from Channels

Setbacks from banks of watercourses and/or other protection measures shall be established in accordance with approved studies and this ordinance. Along reaches of watercourses where hazards from eroding banks or channel meandering are considered by the Floodplain Administrator to be severe, special engineering studies, prepared and sealed by an Arizona Registered Professional Civil Engineer may be required of the property owner or developer.

G. Cost recovery for drainage or flood control improvements.

The Floodplain Board may establish a cost recovery system or fee system for the improvement of installation of public flood control systems. The purpose of the fee is to provide a method for off-site improvements necessary to mitigate the effect of urbanization and to provide a systematic approach for the construction of public flood control improvements. If such a system is adopted, it shall demonstrate that the fee will in some manner benefit the property from which the fee is collected and be applied equitably to all property in proportion to floodwaters generated by urban use of the property. The fees will also be restricted to providing flood control improvements necessary for the allowed use of the properties from which the fee is collected, and the fees shall be reasonably related to the actual cost of providing flood control improvements beneficial to the site or surrounding area.

5.10 MAINTENANCE OF PRIVATE DRAINAGE IMPROVEMENTS

- A. When drainage improvements are associated with an approved development plan, subdivision plat or approved engineering report, and are constructed to provide flood protection to remove or reduce flood hazards, including those identified by FEMA or for storm water quality control, and where those improvements are privately owned, then it shall be the responsibility of the property owner(s) to perform maintenance as necessary to ensure the integrity of said drainage improvements and maintenance of the flood carrying capacity to the designed discharge.
1. Covenants, conditions and restrictions shall be required for private drainage improvements, prior to the construction of the improvements. The covenants, conditions and restrictions must outline maintenance responsibilities of the property owners and must be reviewed and approved by the Floodplain Administrator, prior to the construction of the drainage improvements.

5.11 FLOODWAYS

Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions apply:

- A. Prohibit encroachments, including fill, new construction, substantial improvements and other development, unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. All new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Section 5.0.

5.12 EROSION HAZARD AREAS AND BUILDING SETBACKS.

Setbacks near major watercourses

For major watercourses with base flood peak discharges of 2,000 cfs or greater, the following build setbacks shall be required where approved bank protection is not required:

- A. Along the major natural watercourses such as the San Pedro River and Babocomari River, there will be a minimum building setback of 300 feet. All other major watercourses will follow State Standard methods for calculating setbacks.
- B. Along major natural watercourses where unusual conditions do exist that may increase or decrease the required erosion hazard setback, building setbacks shall be established on a case-by-case basis by the Chief Engineer using the standard adopted by the ADWR or other applicable engineering methods which establish safe limits for the development. Unusual conditions include but are not limited to historical meandering of the watercourse, large excavation pits, poorly defined or poorly consolidated banks, natural channel armoring, proximity to stabilized structures such as bridges or rock outcrops, and changes in the direction, amount and velocity of the flow of water within the watercourse.
- C. When determining building setback requirements, the Chief Engineer shall consider the danger to life and property due to existing flood heights or velocities and historical channel meandering.
- D. For constructed channels, structural bank protection to prevent erosion is required for major watercourses with base flood peak discharge of more than 2,000 cfs unless a written waiver of the requirement is granted by the Chief Engineer. A waiver of the requirement may be granted based on an acceptable engineering study, which has been prepared and sealed by an Arizona registered civil engineer.

Setbacks near minor watercourses

For minor natural washes with a base flood peak discharge of less than 2,000 cfs, the following building setbacks shall be required

- A. A distance of 50 feet from watercourses with base flood peak discharges of less than 2,000 cfs, but more than 500 cfs.
- B. A distance of 20 feet from watercourses with base flood peak discharges of less than 500 cfs, but more than 100 cfs.
- C. Alternative safe limits for erosion setbacks approved in writing by the Chief Engineer based on an acceptable engineering study prepared and sealed by an Arizona registered civil engineer. However, at no time shall a setback of less than 20 feet from the top of channel bank be permitted in order to provide for reasonable access and stability of nearby structure foundations, except as allowed pursuant to subpart D of this provision.
- D. Along minor natural washes where unusual conditions exist, building setbacks shall be established on a case-by-case basis by the Chief Engineer, using ADWR standards or other applicable engineering methods or an acceptable engineering study is prepared and sealed by an Arizona registered civil engineer and approved by the Chief Engineer. When determining building setback requirements, the Chief Engineer shall consider danger to life and property due to existing flood heights or velocities and historical channel meandering. Unusual conditions include but are not limited to historical meandering of the watercourse, large excavation pits, poorly defined or poorly consolidated banks, natural channel armoring, proximity to stabilized structures such as bridges or rock outcrops, and changes in the direction, amount and velocity of flow of the waters in the watercourse.

- E. For constructed channels, channel banks are required to be stabilized to prevent erosion along minor watercourses with base flood peak discharges of less than 2,000 cfs, but greater than 500 cfs. Stabilization is required unless a waiver to the requirement is granted by the Chief Engineer based on an engineering study prepared and sealed by an Arizona registered civil engineer which demonstrates an appropriate building setback for an earthen channel, based on soil and natural flow conditions. For constructed channels with a base flood peak discharge of less than 500 cfs, channel stabilization may be required based on engineering analysis and assessment of soil conditions and flow velocities.

SECTION 6 VARIANCE PROCEDURE

6.1 NATURE OF VARIANCES

The variance criteria set forth in this section of the ordinance are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this ordinance would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure (except with respect to Subsection 6.3.B, below), its inhabitants or the property owners.

It is the duty of the Floodplain Board to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below the regulatory flood elevation is so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are detailed and contain multiple provisions that must be met before a variance may be properly granted. These criteria are designed to screen out situations in which alternatives other than a variance are more appropriate.

6.2 APPEAL BOARD

- A. The Floodplain Board of Cochise County shall hear and decide:
1. Appeals (other than appeals of notices of violations governed by Section 3.12 above) when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the administration of this ordinance; and
 2. Requests for variances from the requirements of this ordinance.
- B. Before approving such applications, the Floodplain Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:
1. the danger that materials may be swept onto other lands to the injury of others;
 2. the danger of life and property due to flooding or erosion damage;
 3. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 4. the importance of the services provided by the proposed facility to the community;
 5. the availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage;

6. the compatibility of the proposed use with existing and anticipated development;
 7. the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 8. the safety of access to the property in time of flood for ordinary and emergency vehicles;
 9. the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,
 10. the costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water system and streets and bridges.
- C. Upon consideration of the factors of Section 6.2(c) and the purposes of this ordinance, the Floodplain Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- D. Any applicant to whom a variance is granted shall be given written notice, signed by the Floodplain Administrator that:
- a. the issuance of a variance to construct a structure below the base flood level may result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage; and
 - b. Such construction below the base flood level increases risks to life and property.

Such notification shall be maintained with a record of all variance actions as required in Paragraph 6.2.E. of this ordinance. Such notice will also state that the land upon which the variance is granted shall be ineligible for exchange of land pursuant to any flood relocation and land exchange program. A copy of the notice shall be recorded by the Floodplain Board in the office of the Cochise County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

- E. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance and report such variances issued in its biennial report submitted to FEMA.

6.3 CONDITIONS FOR VARIANCES

- A. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided that the provisions of Sections 4 and 5 of this ordinance have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
- B. Variances may be issued for the repair, rehabilitation or restoration of structures listed in the National Register of Historic Places or the State Inventory of Historic Places, upon a determination that the proposed repair or rehabilitation will not preclude the structures continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- C. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

- D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- E. Variances shall only be issued upon:
1. a showing of good and sufficient cause;
 2. determination that failure to grant the variance would result in exceptional hardship to the applicant;
 3. a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in Section 2.0 of this ordinance in the definition of “Functionally Dependent Use”; and,
 4. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
 5. a determination that the variance is justified pursuant to A.R.S. § 48-3609.A.7.

SECTION 7 FLOODPLAIN PERMITS AND OTHER FEES

For each floodplain use permit application (for property in an area of special flood hazard), a nonrefundable filing/permit fee shall be charged based upon the adopted fee schedule. Fees specified herein shall be in addition to any fees required pursuant to other applicable regulations and ordinances.

- A. Single and multi-family residence, manufactured home, non-residential building, for which a drainage/hydrology study has not been submitted and approved - \$150.00.
- B. Single and multi-family residence, manufactured home, non-residential building, for which a hydrology and hydraulics report has been submitted and approved - \$65.00.
- C. Accessory structures or additions, including detached garages, sheds, carport and other structures (per structure or addition) - \$40.00 each
- D. Permit fees for commercial and other non-residential developments shall be assessed in accordance with cost of the development as follows:
150.00 if less than \$250,000
\$250.00 if over \$250,000
- E. Variance requests - **\$75.00**

SECTION 8 ADOPTION OF ARIZONA DEPARTMENT OF WATER RESOURCES (ADWR) STANDARDS

The Director of the Arizona Department of Water Resources has authority outlined in A.R.S. §48-3605(A) to establish base flood elevations. The ADWR with the assistance of the Arizona Floodplain Managers Association and Arizona city and county flood control districts have established standard methodologies for determining base flood elevations and other design standards for floodplain and stormwater studies. The Cochise County Flood Control District hereby adopts the following standards and any modifications and amendments thereto:

8.1 ADWR STANDARD 1-97, "Instructions for Organizing and Submitting Technical Documentation for Flood Studies"

This standard establishes documentation standards for flood studies that delineate or revise floodplains. It applies to any Level III flood studies submitted to Cochise County.

8.2 ADWR STANDARD 2-96, "Delineation of Riverine Floodplains and Floodways in Arizona"

This standard provides methodologies for estimating 100-year peak discharges, delineating 100-year floodplain limits and determining administrative floodplains. There are three levels of complexity of analysis. The Floodplain Administrator will determine the level of analysis required.

8.3 ADWR STANDARD 3-94, "Supercritical Flow"

This standard establishes guidelines for modeling floodways for watercourses with supercritical or near critical flow.

8.4 ADWR STANDARD 4-95, "Identification of and Development within Sheetflow Areas"

This standard provides minimum standards for identification of sheetflow areas and for development within them.

8.5 ADWR STANDARD 5-96, "Watercourse System Sediment Balance"

This standard provides guidelines for determining: lateral migration setbacks for riverine floodplains, channel degradation estimation for alluvial channels, and evaluation of river stability impacts associated with Sand & Gravel mining

8.6 ADWR STANDARD 7-98, "Watercourse Bank Stabilization"

This standard provides standards for design and construction of channel bank protection.

8.7 ADWR STANDARD 8-99, "Stormwater Detention/Retention"

This standard details methodologies for sizing detention/retention systems when required.

8.8 ADWR STANDARD 9-02, "Floodplain Hydraulic Modeling"

This standard provides a procedure to use in order to fulfill the requirements of flood insurance studies and county flood damage prevention ordinances.

8.9 ADWR STANDARD 6-05, "Development of Individual Residential Lots Within Flood-prone Areas"

This standard provides guidelines for site plans for individual residential lots to be used for all new construction.

8.10 ADWR STANDARD 10-07 “Hydrologic Modeling Guidelines”.

SECTION 9 AMENDMENTS

Amendments to these Regulations shall be as follows:

- 9.1 Amendment to the text of these Regulations shall occur only upon a hearing of the Flood Control District Board of Directors after giving not less than fifteen (15) days notice by publication of the proposed change in a newspaper of general circulation in the County. Any interested person may submit an application for an amendment, or the Flood Control District Board of Directors may act upon its own motion.
- 9.2 A copy of all proposed changes and notice of hearing shall be submitted to the appropriate Flood Insurance Administrator in FEMA and to the Arizona Department of Water Resources for their comment at least thirty days prior to the hearing.
- 9.3 Approval of an amendment to these Regulations may be granted only if the amendment does not conflict with any applicable federal or state requirements for Floodplain Management Regulations. A copy of any regulation adopted by the district shall within five (5) days thereafter be filed with Arizona Department of Water Resources and with each political subdivision and Municipal Corporation in the area of jurisdiction.